No.



9700379

HHE UNKHED SHAYES OF ANTERIOR

TO ALL TO WHOM: THESE: PRESENTS: SHALL; COME:

Hybri Jech Seed International, a unit of Monsanto Co.

There has been presented to the

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW in such cases made and provided have been complied with, and the TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL. Y VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'B1183'

In Costinony Macred I have hereunto set my hand and caused the seal of the Mant Mariety Arctivition Office to be affixed at the City of Washington, D.C. this thirtieth day of July in the year of our Lord one thousand

nine hundred and ninety-nine

		Lo	cal Reproduction of FURIM - UNIB NO. 0381-0033
U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE		The following statements are made in acco 1974 (5 U.S.C. 552a)	rdance with the privacy Act of
SCIENCE DIVISION - PLANT VARIETY PROTECTION	N OFFICE		
APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE		Application is required in order to determic certificate is to be issued (7 U.S.C. 2421) 1 until certificate is issued (7 U.S.C. 2426).	
1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR	3. VARIETY NAME , PEF
~		EXPERIMENTAL NUMBER	'B1183 m
HybriTech Seed International, a unit of Monsanto C	30.	B1183	DI102 .8:
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)		5. TELEPHONE (include area code)	PVPONUMBER
5912 N. Meridian Street		800-239-7142	9700379
Wichita, Kansas 67204-1699			
		6. FAX (include area code)	F DATE
			 \$100,000 to \$100,000 to \$100,
		316-755-0072	\$ 8/14/1997
C. CIDITO AND ORDOUGNAAVE	le PANTIN NAME (Por		FILING AND EXAMINATION FIRE
7. GENUS AND SPECIES NAME	8. FAMILY NAME (Bot	onicai j	7 <u> </u>
Triticum aestivum	Gramineae		B
9. CROP KIND NAME (common name)			R DATE
Hard Red Winter Wheat			8/11/97
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGA	ANIZATION (corporation,	partnership, association,etc.) (common name)	E CERTIFICATION FLE
Corporation			। 300 <u>क</u>
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	DATE
Delaware		1933	6/17/99
Delaware		1733	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, T	TO SERVE IN THIS APPLI	CATION AND RECEIVE ALL PAPERS	14. TELEPHONE (include area code) 970-532-8004
Dr. Gordon Cisar 806 N. Second Street			970-332-6004
PO Box 1320			15. FAX (include area code)
Berthoud, Colorado 80513			15. 1121(111.111.1111.1111.1111.1111.1111.
20211101111, 2022111110 00022			970-532-2035
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (#		2)	
a. X Exhibit A. Origin and Breeding History of the Variety	·		
b. X Exhibit B. Statement of Distinctness			
c. X Bxhibit C. Objective Description of the Variety d. X Exhibit D. Additional Description of the Variety		and the second s	
	ymorahin		
e. X Exhibit E. Statement of the Basis of the Applicant's Or f. X Voucher Sample (2,500 viable unireated seeds, or, for tuber p		that times willing will be devented and maintained in	a public renactions)
g. X Filing and Examination Fee (\$2,450), made payable to			-
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SO.			re Section 83(a) of the Plant Variety Protection Act)
X YES (if "yes", answer items 18 and 19 below)		NO (if 'no", go to item 20)	
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIN	MITED AS TO NUMBER O	19. IF 'YES' TO ITEM 18, WHICH CLASSES	OF PRODUCTION BEYOND BREEDERS SEED?
GENERATIONS?		[
X YES NO X FOUNDATION X REGIS			ERED X CERTIFIED
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BI		-	U.S. OR OTHER COUNTRIES?
YES (iF "YES", give names of countries and dates)	X	NO	
21. The applicant(s) declare that a viable sample of basic seed of the variety will be			unce with such regulations as may be
applicable, or for a tuber propagated variety a tissue culture will be deposited in	- , ,		1.11
The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced or Section 41, and is entitled to protection under the provisions of Section 42 of the			d stable as required in
Applicant(s) is an informed that false representation herein can jeopardize protein	-	•	
SIGNATURE OF APPLICANT (Owner(s))	*	SIGNATURE OF APPLICANT (Own	ner{s})
Hardon / Inon	,		•
NAME (Please print or type)		NAME (Please print or type)	
Dr. Gordon Cisar			
CAPACITY OR TITLE DA	TE/	CAPACITY OR TITLE	DATE
Senior Project Leader, HRW Research	Aug. 4,19	9/	<u> </u>
SD-470 (04-95)	()	(See reverse for insti	ructions and information collection burden statement)

9700379

Exhibit A. Origin and Breeding History of B1183

Parentage: Siouxland/B403s82(Sturdy/Centurk)

Date of Cross: Spring 1984

The cross that produced B1183 was made in the 1984 spring greenhouse at Wichita, Kansas. The F1 was grown in the 1984 fall greenhouse in Wichita, Kansas. Seeds harvested from this row were grown in a 1986 F2 bulk plot at Wichita, Kansas. Heads were selected from this bulk population and were grown as F3 headrows in Wichita, Kansas in 1987. Heads were taken from selected rows and were grown as F4 headrows in Wichita, Kansas in 1988. The headrow that became B1183 was selected for disease resistance and excellent agronomics. This selection was grown in F5 observation plots in Leoti, Kansas and Wichita, Kansas in 1989. The observation plot was harvested at Wichita and tested in yield trial plots in 1990 and 1991.

In 1992 an initial Breeder's seed increase was grown in Wichita, Kansas which yielded 120 pounds. In 1993 and 1994 additional Breeder's seed increases were grown in Wichita, Kansas which yielded approximately 120 pounds. In 1995 a one acre Foundation seed increase was grown in Greeley, Colorado which yielded 5,000 pounds. In 1996 an additional two acre Foundation seed increase was grown in Greeley, Colorado which yielded 9,450 pounds.

B1183 has been uniform and stable since 1994. Less than 0.8% of the plants were rogued from the Foundation seed increase in 1995. Approximately 85% of the rogued variant plants were taller height wheat plants (5 to 15 cm), and 4% were awnletted wheat plants. Up to 1% variant plants may be encountered in subsequent generations.

Exhibit B. Statement of Distinctness

B1183 is most similar to the hard red winter wheat 'Brule'. However, it can be easily distinguished by the following morphological characteristics:

- B1183 has an acute beak on the glume (Weld County, Colorado 1996 and Berthoud, Colorado 1997). Brule has an acuminate beak on the glume (Crop Registration no. 679 also supported by Weld County, Colorado data 1996 and Berthoud, Colorado data 1997).
- B1183 has a medium brush length (Weld County, Colorado 1996 and Berthoud, Colorado 1997). Brule has a short brush length (Crop Registration no. 679, supported by Weld County, Colorado data 1996 and Berthoud, Colorado 1996).
- B1183 exhibits hairs on the auricle during growth stages 5 thru 7 (Weld County, Colorado 1996 and Berthoud, Colorado Field 1997). Brule does not exhibit auricle hairs during growth stages 5 thru 7 (Crop Registration no. 679, supported by Weld County, Colorado data 1996 and Berthoud, Colorado 1997).
- B1183 has a square shoulder shape on the glume (Weld County, Colorado 1996 and Berthoud, Colorado1997). Brule is described in Crop Registration no. 679 as "shoulders are square but narrow to wanting". In Weld County, Colorado 1996 and Berthoud, Colorado 1997 they would be classified as wanting.

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE DIVISION BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY

WHEAT	(Triticum Spp.)				
NAME OF APPLICANT(S)		FOR OFFICIAL USE ONLY			
HybriTech Seed International, a unit of Monsanto Co. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 5912 N. Meridian Street Wichita, Kansas 67204-1699		PVPO NUMBER	9700379		
		NAME OR EXPERIMENTAL DESIGNATION B1183			
Place the appropriate number that describes the varietal character of this variet Place a zero in the first box when number is either 99 or less or 9 or less respe minimum of 100 plants. Comparative data should be determined from varieti standard may be used to determine plant colors; designate system used. Please answer all questions for your variety; lack of response may delay progressive the plant colors.	ctively. Data for quantitative plant cha es entered in the same trial. Royal Hor	racters should be bas ticultural Society or	ed on a any recognized		
1. KIND: 1	(
	er (specify)				
2. VERNALIZATION:			•		
2 1=Spring 2=Winter 3=Other (specify)					
3. COLEOPTILE ANTHOCYANIN:					
1 1=Absent 2=Present					
4. JUVENILE PLANT GROWTH:		•			
2 1=Prostrate 2=Semi-erect 3=Erect					
5. PLANT COLOR (boot stage):		*			
3 = Yellow-Green 2 = Green 3 = Blue-Green	L				
6. FLAG LEAF (boot stage):					
$1 = \text{Erect} \qquad 2 = \text{Recurved}$			e e		
2 1 = Not Twisted 2 = Twisted					
7. EAR EMERGENCE:					
Number of Days Earlier Than	Equal to Karl	· · · · · · · · · · · · · · · · · · ·	*		
Number of Days Later Than			*		
8. ANTHER COLOR:	1. 10.000				
$1 = YELLOW \qquad 2 = PURPLE$					
9. PLANT HEIGHT (from soil to top of head, excluding awns):					
cm Taller Than	Equal to Mesa		*		
cm Shorter Than	•		*		

^{*} Relative to a PVPO-Apprved Commercial Variety Grown in the Same Trial

Exhib	it C (Wheat) Page 2
	STEM: A. ANTHOCYANIN
1	l= Absent 2=Present
I	B. WAXY BLOOM
2	1=Absent 2=Present
	C. HAIRINESS (last internode of rachis)
2	1=Absent 2=Present
	D. INTERNODE (specify number)
1	1=Hollow 2=Semi-solid 3=Solid
	E. PEDUNCLE
2	1=Erect 2=Recurved
3	2 cm Length
	EAD (at Maturity): DENSITY
2	1=Lax 2=Middense 3= Dense
·····	. SHAPE
1	1 = Tapering $2 = Strap$ $3 = Clavate$ $4 = Other(specify)$
	CURVATURE
2	1 = Erect $2 = Inclined$ $3 = Recurved$
D	. AWNEDNESS
4	1 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned
	LUMES (at Maturity):
$\begin{bmatrix} 1 \end{bmatrix}^{\mathrm{A}}$	COLOR 1 = White 2 = Tan 3 = Other (specify)
	1 = White 2 = Tan 3 = Other (specify) SHOULDER
4	
·······	1 = Wanting 2 = Oblique 3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate BEAK
2	1 = Obtuse 2 = Acute 3 = Acuminate
	LENGTH
1	1 = Short (ca. 7mm) $2 = Medium (ca. 8mm)$ $3 = Long (ca. 9mm)$
—— Е.	WIDTH
2	1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)
13. SE	
A.	SHAPE
	1 = Ovate 2 = Oval 3 = Elliptical
B.	CHEEK
	1=Rounded 2=Angular
7 10.	BRUSH
	1=Short 2=Medium 3=Long
1	1 = Not Collared 2 = Collared
D.	· ·
1	1 = Width 60% or less of Kernel 2 = Width 80% or less of Kernel 2 = Depth 20% or less of Kernel 2 = Depth 35% or less of Kernel
	3 = Width Nearly as Wide as Kernel 2 = Depth 55% or less of Kernel 3 = Depth 50% or less of Kernel

	ED: (continued) COLOR	
3	1 = White $2 = Amber$ $3 = Red$	4 = Other (specify)
F.	TEXTURE	
1	1=Hard 2=Soft	
G.	PHENOL REACTION (see instructions):	
-	1 = Ivory $2 = Fawn$ $3 = Light Brown$	7n 4 = Dark Brown 5 = Black
14. DIS	SEASE: (0=Not Tested; 1=Susceptible; INDICATE THE SPECIFIC RACE OR STRAIN TESTE	2=Resistant; 3=Intermediate; 4=Tolerant) ED
4	Stem Rust (Puccinia graminis f. sp. tritici)	Leaf Rust (Puccinia recondita f. sp. tritici)
0	Stripe Rust (Puccinia striiformis)	1 Loose Smut (Ustilago tritici)
0	Tan Spot (Pyrenophora tritici-repentis)	Flag Smut (Urocystis agropyri)
0	Halo Spot (Selenophoma donacis)	Common Bunt (Tilletia tritici or T. laevis)
0	Septoria nodorum (Glume Blotch)	Dwarf Bunt (Tilletia controversa)
0	Septoria avenae (Speckled Leaf Disease)	Karnal Bunt (Tilletia indica)
0	Septoria tritici (Speckled Leaf Blotch)	Powdery Mildew (Erysiphe graminis f. sp. tritici)
0	Scab (Fusarium spp.)	0 Snow Molds
0	Black Point (Kernel Smudge)	Common Root Rot (Fusarium, Cochliobolus and Bipolaris spp.
0	Barley Yellow Dwarf Virus (BYDV)	Rhizoctonia Root Rot (Rhizoctonia solani)
2	Soilborne Mosaic Virus (SBMV)	Black Chaff (Xanthomonas campestris pv. translucens)
0	Wheat Yellow (Spindle Streak) Mosaic Virus	Bacterial Leaf Blight (Pseudomonas syringae pv. syringae)
0	Wheat Streak Mosaic Virus (WSMV)	Other (specify)
	Other (specify)	Other (specify)
	Other (specify)	Other (specify)
	Other (specify)	Other (specify)

Exhibit (C (Wheat) Page 4		B1183	
15. INS	ECT: (0=Not Tested; 1=Susceptible; SPECIFY BIOTYPE (where needed)	2=Resistant;	3=Intermediate; 4=Tolerant)	
0	Hessian Fly (Mayetiola destructor)		Other (specify)	
0	Stem Sawfly (Cephus spp.)		Other (specify)	<u></u>
0	Cereal Leaf Beetle (Oulema melanopa)		Other (specify)	_
1	Russian Aphid (Diuraphis noxia)		Other (specify)	_
0	Greenbug (Schizaphis graminum)		Other (specify)	
0	Aphids		-	
	DITIONAL INFORMATION ON ANY ITEM A	ABOAE UB GEA	SED AT COMMENTS.	
	STITISTALD HAT CHARACTER ON PARALLE THE PA	BOVE, OK GEI	NEICAL COMMENTS.	
	······································			

Exhibit D. Additional Description of B1183

B1183 is a hard red winter wheat bred and developed by HybriTech Seed International, Inc. B1183 is a semidwarf wheat with medium-early maturity and good straw strength. B1183 provides resistance to Soilborne mosaic virus and moderate resistance to Powdery mildew and Stem rust. Milling and baking characteristics are acceptable.

Juvenile growth habit is semierect. Plant color at boot stage is blue green. Auricle anthocyanin and auricle hairs are present. Flag leaf at boot stage is erect and twisted. Waxy bloom is present on the head, stem and flag leaf sheath. Anther color is yellow. Head shape is tapering and awned. Glumes are glabrous, midwide in width and short in length with square shoulders and acute beaks. Plant color is white at maturity. Seed shape is ovate. Brush hairs are medium in size. Seed crease depth is shallow and width is narrow. Seed cheeks are round.

B1183 is well adapted to the western Great Plains, from the Texas panhandle to the Nebraska panhandle.

QUALITY

9700379

LISTING OF QUALITY DATA FOR B1183 AND CHECKS GROWN IN THE SOUTHERN ADVANCED TRIAL IN 1992

XOGRAPH		
PEAK	BAKE	BREAD
TIME	MIXTIME	LOAF VOLUME
6.3	5.8	945
6.7	6.1	1105
3.3	3.7	1025
5.0	4.7	955
3.9	3.3	1030
5.0	5.0	865
	PEAK TIME 6.3 6.7 3.3 5.0 3.9	PEAK TIME BAKE MIXTIME 6.3 5.8 6.7 6.1 3.3 3.7 5.0 4.7 3.9 3.3

LISTING OF AGONOMIC AND YIELD DATA FOR B1183 AND CHECKS GROWN IN THE SOUTHERN ADVANCED TRIAL IN 1992

LINE	NUMBER OF SITES	BPA 3	WSL 1	HDT 3	HIT 2	SBMV 1	PMW 1	LRT 2
B1183		40.8	1	28	31	1	1	6
KARL		39.7	1 .	28	35	1	2	2
MESA		36.4	3	28	30	3	6	6
2180		41	1	29	33	1	1.	3
TOMAHAV	VK	41.8	2	32	30	2	2	2
TAM 107		36.1	2	27	31	3	1	9

WSL = WINTER SURVIVAL

HDT = HEADING DATE

HIT = HEIGHT

SBMV = SOIL BORNE MOSAIC VIRUS

PMW = POWDERY MILDEW

LRT = LEAF RUST

1= BEST OR RESISTANCE 9= POOR OR SUSCEPTIBLE

U.S. DEPARTMENT OF ACRECULTURE	FORM APPROVED - OMB	NO. 0581-0055 EXPIRES: 12-3
AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE	The following statements are m 1974 (5 U.S.C. 552s) and the Pr	ede in accordance with the Privacy A sperwork Reduction Act (PRA) of 1995
EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP	Application is required in order certificate is to be issued (7 U.S. until certificate is issued (7 U.S.)	to determine if a plant variety prote .C. 2421]. Information is held confide C. 2426].
1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
HybriTech Seed International, a unit of Monsanto Company	B1183	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)	5. TELEPHONE (include area code)	6. FAX (include area code)
5912 N. Meridan Wichita, Kansas 67204-1699	316-755-1250	316-755-0072
	7. PVPO NUMBER	9700379
8. Does the applicant own all rights to the variety? Mark an "X" in appropriate bk	ock. If no, please explain.	
	,	X YES NO
	·	
		<u> </u>
 Is the applicant (individual or company) a U.S. national or U.S. based company? If no, give name of country 	Sec. 1	X YES NO
O. Is the applicant the original breeder? If no, please answer the following:		X YES NO
 a. If original rights to variety were owned by individual(s): Is (are) the original breeder(s) a U.S. national(s)? If no, give name of col 	untry	· .
b. If original rights to variety were owned by a company: Is the original breeder(s) U.S. based company? If no, give name of count	try	YES NO
1. Additional explantion on ownership (If needed, use reverse for extra space):		
Please see following page.		
EASE NOTE:	,	. •
ant variety protection can be afforded only to owners (not licensees) who meet one	of the following criteria:	
If the rights to the variety are owned by the original breeder, that person must be of a country which affords similar protection to nationals of the U.S. for the same	RUS national national of a	JPOV member country, or national
If the rights to the variety are owned by the company which employed the original nationals of a UPOV member country, or owned by nationals of a country which afgenus and species.	l breeder(s), the company mus ffords similar protection to nati	t be U.S. based, owned by onals of the U.S. for the same
If the configure is an arrange of the configure is a second of the configuration	ler and the applicant must mee	t one of the above criteria.
the applicant is an owner who is not the original breeder, both the original breed		
If the applicant is an owner who is not the original breeder, both the original breed is original breeder may be the individual or company who directed final breeding inition.	. See Section 41(a)(2) of th	e Plant Variety Protection Act fo

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, ago, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braile, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-2791.

Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

To file a complaint, write the Socretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or cell (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

Exhibit E. Statement of the Basis of Applicant's Ownership

The variety for which Plant Variety Protection is hereby sought was developed by Dr. Randall Rich, an employee of HybriTech Seed International, Inc. By agreement between employees and HybriTech Seed International, all rights to any invention, discovery, or development made by the employee while employed by HybriTech Seed International, were assigned to HybriTech Seed International, a unit of Monsanto Company, with no rights of any kind pertaining to 'B1183' being retained by the employees.